

REMARKS

In view of the above amendments and the following remarks, reconsideration and allowance of this application are requested. Claims 1-101 are pending with claims 1, 13, 19, 36, 52, 71, 88-98, and 100 being independent. Claims 19 and 36 have been amended. Support for the amendment to claims 19 and 36 is found in the application at least in Fig. 7. Claims 94-101 have been added. No new matter has been added.

Applicant initially expresses appreciation at the allowance of claims 1-18, 52-87, and 89-93 and indication that claims 32 and 47-51 are directed to allowable subject matter. New claims 94-99 correspond to claims 32 and 47-51 and their respective base claims. As such, new claims 94-99 are allowable.

Claims 19-23 and 36-41 are rejected as being anticipated by Goble (U.S. Patent No. 4,738,255), and claims 24-31, 33-35, and 42-46 are rejected as being obvious over Goble in view of Anspach (U.S. Patent No. 5,102,421). The Examiner cites Goble as disclosing an anchor for insertion into a bone and describes the anchor as comprising a rigid body 86 defining a transverse opening 84a, 84b and a body having an exterior enlargement 75. The Examiner states that although Goble's device is adapted to be used with the retainer member, there is nothing to prevent it from being used without the retainer member. The Examiner further states that Goble is capable of being used directly into a bone member.

Claim 19, as amended, is directed to an anchor for insertion into a bone hole to secure a suture to bone. The anchor includes a rigid body defining a generally transverse, circumferentially bounded opening extending through the body for receiving the suture. The body includes a non-helically extending exterior enlargement for engaging the bone upon insertion to resist withdrawal of the anchor from the bone.

Claim 36, as amended, is directed to an anchor for insertion into a bone hole to secure a suture to bone. The anchor includes a body and a non-helical circumferential ridge. The body includes a cylindrical exterior surface and defines a single, circumferentially bounded opening for receiving the suture. The non-helical circumferential ridge extends from the cylindrical

exterior surface of the body for engaging the bone upon insertion to resist withdrawal of the anchor from the bone.

Goble does not describe or suggest an anchor with a generally transverse, circumferentially bounded opening for receiving suture, as now claimed in claim 19. Instead, Goble discloses an anchor rivet 75 defining a transverse opening 84a, 84b for receiving suture that, rather than being circumferentially bounded, communicates at the circumference of the opening with a longitudinal channel 84. See, e.g., Fig. 10 and col. 10, line 65 to col. 11, line 4. Moreover, Goble does not describe or suggest an anchor with a single, circumferentially bounded opening for receiving suture, as now claimed in claim 36. Instead, Goble's anchor rivet has two openings for receiving suture: the transverse opening 84a, 84b, and the longitudinal channel 84. Furthermore, applicants do not concede that Goble's anchor rivet 75 is capable of being used directly into a bone member. In use, Goble's anchor rivet 75 engages a slotted ring 76, not bone.

Therefore, claims 19 and 36, and their dependent claims, are patentable over Goble.

Furthermore, Anspach does not remedy the deficiencies of Goble discussed above. While Anspach discloses a circumferentially bounded hole 40 for receiving a suture, there is no suggestion in either Goble or Anspach that would lead one of ordinary skill in the art to modify Goble's anchor rivet to include Anspach's circumferentially bounded hole 40. In particular, Goble's anchor rivet has a suture that passes through passages 84, 84a and 84b, and the suture advantageously has two free ends extending from the anchor rivet for ease of tying the suture to attach a ligament to bone. Anspach merely discloses one end of suture extending from a suture anchor 2. As such, if Goble's anchor rivet was modified to include Anspach's hole 40, only one end of suture would extend from Goble's anchor rivet, removing an advantageous feature of Goble's anchor rivet.

In addition, in Goble, to couple the plastic suture to the anchor rivet, the suture merely need be threaded through the passages. In Anspach, the coupling of a plastic suture to the anchor requires further processing steps, such as thermal working of the anchor wall (see, e.g., the Anspach patent, at col. 3, line 33). Thus, the loss of another advantageous feature would result from modifying Goble's anchor rivet.

Therefore, the rejected claims are patentable over Goble in view of Anspach.

Claim 88 also stands rejected as being obvious over Goble in view of Anspach. Claim 88 is directed to an anchor assembly that includes an anchor body and a drive tool for inserting the anchor body in bone. The anchor body defines an opening for receiving a first portion of suture. The drive tool includes a mount for releasably receiving a second portion of the suture to enable the anchor body to be secured to the drive tool at least in part by attaching the second portion of the suture to the mount.

Neither Goble nor Anspach describes or suggests a drive tool that includes a mount for releasably receiving a second portion of the suture to enable the anchor body to be secured to the drive tool. Instead, Goble illustrates a suture passing from the anchor rivet, through an anchor ejector, and out of an opening in a mandrel head, but does not disclose a mount for releasably receiving the suture. See, e.g., Fig. 10. Similarly, Anspach illustrates a suture passing through a longitudinal slot in an impact tool, but does not disclose a mount for releasably receiving the suture. See, e.g., Fig. 5. As such, claim 88 is allowable over the combination of Goble and Anspach.

New independent claim 100 corresponds to claim 33, which has been rejected as being obvious over Goble in view of Anspach. Claim 100 is directed to an anchor for insertion into a bone hole to secure a suture to bone. The anchor includes a rigid body defining a generally transverse opening extending through the body for receiving the suture. The body has a non-helically extending exterior enlargement for engaging the bone upon insertion to resist withdrawal of the anchor from the bone. The opening has open ends and the body has an outer surface defining a pair of suture receiving channels, each suture receiving channel being aligned with one of the open ends.

Neither Goble nor Anspach describes or suggests an anchor that includes a body having an outer surface defining a pair of suture receiving channels, each suture receiving channel being aligned with one of the open ends. Rather, as illustrated in Goble's Figs. 9A, 10, and 11, the suture extends from openings 84a, 84b and encircles an anchor head 86 having an outer surface without channels aligned with open ends of openings 84a, 84b. See, e.g., col. 11, lines 4-10. In Anspach, hole 40 only has one open end, and anchor 2 has an outer surface without channels aligned with the open end of hole 40. See, e.g., Figs. 1 and 4.

As such, claims 100 and 101 are allowable over the combination of Goble and Anspach.

Applicant : DiPoto et al.
Serial No. : 09/447,228
Filed : November 22, 1999
Page : 7

Attorney's Docket No.: 00167-368001 / 02-31-0314

Attached is a marked-up version of the changes being made by the current amendment.

Applicant asks that all claims be allowed. Please apply any charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

Date: May 24, 2002

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Version with markings to show changes made

In the claims:

Claims 19 and 36 have been amended as follows:

19. (Amended) An anchor for insertion into a bone hole to secure a suture to bone, comprising:

a rigid body defining a generally transverse, circumferentially bounded opening extending through said body for receiving the suture,
said body having a non-helically extending exterior enlargement for engaging the bone upon insertion to resist withdrawal of said anchor from the bone.

36. (Amended) An anchor for insertion into a bone hole to secure a suture to bone, comprising:

a body having a cylindrical exterior surface, said body defining [an] a single, circumferentially bounded opening for receiving the suture, and
a non-helical circumferential ridge extending from the cylindrical exterior surface of said body for engaging the bone upon insertion to resist withdrawal of said anchor from the bone.